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(54) Title: NOVEL BACILLUS BAGCEL CELLULOSE

## ORF Nucleotide sequence of cellulase gene

ATGGGTTTATA	CCAAAGCGAA	GTGTACGTTG	AAAAAACTG	TCTTGTTGG	50
TTTAATTCCTC	TGTTTAAATG	TGTCAATGTT	TGTTCCAATG	ACATCAGCTG	100
AAGATGTACAC	TTGCTCACAG	TTGGATATTC	ACTCCTATGT	AGCTGACATG	150
CAGCCTGGCT	GGAATTTAGG	AAATACGTTT	GACGCTGTTG	GAGATGATGA	200
AACAGCGTGG	GGGAATCCTC	GTGTAACAAG	AGAGTTAATA	AAAACGATTG	250
CTGATGAAGG	GTATAAAAGC	ATTCGTATCC	CAGTGACATG	GCAAAATCAA	300
ATGGGTGGTT	CTCCAGATTA	TACGATAAAT	GAAGATTATA	TCAATCGGGT	350
GGAGCAAGCO	ATAGATTGGG	CGTTGGAGGA	AGACTTATAT	GTGATGTTAA	400
ATGTGCATCA	TGACTCATGG	CTGTGGATGT	ATGATATGGA	ACATAACTAT	450
GATGAGGTCA	TGGCAAGATA	TACAGCTATT	TGGGAACAAT	TGTCGGAAAA	500
ATTCAAAAGC	CACTCCCATTA	AGTTGATGTT	TGAGAGTGTC	AATGAGCCTA	550
GGTTTACGCA	GGAGTGGGGA	GAGATTCAAG	AAAATCATCA	TGCTTACTTA	600
GAAGATTTAA	ATAAGACGTT	CTATTATATT	GTCAAGAGAT	CAGGAGGCAA	650
TAATGTGGAG	CGCCCTTTAG	TATTGCCTAC	GATAGAAACA	GCCACGCTCT	700
AGGATTEACT	AGATCGCTTG	TATCAAACAA	TGGAAAGACT	GGATGATCCT	750
TATTTAATTG	CCACGGTGCA	TTATTATGGC	TTCTGGCCAT	TTAGTGTCAA	800
TATAGCAGGG	TACACTCAT	TGAAACAGGA	AACACAACAA	GATATTATAG	850
ACACCTTTGA	CGGTGTTTCA	AACACATTTA	CAGCGCGTGG	TGTCCCACTT	900
GTATTAGGCG	AATTGGGTTT	GTTAGGCTTT	GACAAAAGTA	CGGATGTGAT	950
TCAGCAAGGG	GAGAAATTAA	AGTTTTTTGA	GTTTCTCATC	CATCATCTCA	1000
ATGAACGTGA	TATAACCCAT	ATOTTATGGG	ATAACGGCCA	GCAATTTAAAT	1050
CGAGAAACTT	ATGCATGGTA	TGATCAAGAA	TTTCATGACA	TATTAAAGGC	1100
GAGTTGGGAG	GGGCGTTCTG	CTACAGCAGA	GTCTAATTTG	ATTCATGTGA	1150
AGGACGGAAA	GCCAATTAGA	GATCAAGATA	TACAGCTTTA	CTTAAACGGA	1200
AATGAGCTAA	CAGCCTTACA	GGCAGGGGAG	GAATGCGTTG	TTCTAGGAGA	1250
GGATTATGAA	CTAGCAGGAG	GCGTATTAAC	GCTAAAAGCG	GACACCTTCA	1300
CAAGACTAAT	TACCCCTGGT	CAATTAGGAA	CCAATGCAGT	CATCACAGCA	1350
CAATTTAATT	CTGGAGCAGA	CTGGCGTTTT	CAATTACAGA	ATGTGGAGCT	1400
GCCAAACGGTC	GAAAATACAG	ATGGCTCAAC	ATGGCATTTT	CGGATCCCTA	1450
CCCATTTTAA	TGGTGATAGT	CTTGGGACGA	TGGAAAGCTG	TTATGCAAAC	1500
GGAGAAATATG	CTGGGCGCGA	AGATTGGACG	TCATTTAAAG	AAATTGGGCA	1550
GGCGTTTTCT	CCTAATTACG	CCACAGGGGA	AATTATTATA	TCAGAAAGCT	1600
TCTTTAAACGC	GGTACGGGAT	GATGATATCC	AATTAACATT	TCATTTTTCG	1650
AGCGGAGAGA	CGGTGAATA	TACCTTAAGT	AAAAATGGCA	ATTATGTTCA	1700
AGGTAGACGG	TAA				1713

(57) Abstract: The present invention provides a novel cellulase nucleic acid sequence, designated BagCel, and the corresponding BagCel amino acid sequence. The invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding BagCel, recombinant BagCel proteins and methods for producing the same.

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